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SOME PRACTICAL HINTS ON THE TREATMENT OF FRACTURES.

Read before the Philadelphia County Medical Society, April, 1876.

BY JOHN H. PACKARD, M.D.

MR. PRESIDENT AND GENTLEMEN,—So much has been written, and so ably, upon the subject of fractures, that it might almost seem as if nothing remained to be said in regard to it. And yet I think there are few practical surgeons who will not admit that they are still making it a matter of study, and that in glancing over medical journals this is one of the topics which always arrest the eye. My own belief is that there are many points both in the theory and the practice of surgery, as connected with fractures, which will well bear further discussion. To some of these points let me now ask your attention.

The particular fractures of which I wish to speak this evening are those of the humerus, near the shoulder and near the elbow.

With reference to all injuries of this kind, the rule of the prudent surgeon will be to give a very guarded prognosis; to let the patient and his friends understand that the motions of the neighboring joint will be very apt to be permanently impaired.

One reason for this caution is the great probability of thickening and induration of the soft parts, with adhesions of the tendons and drying of their sheaths, which may be very obstinate, and which in some cases shows a most troublesome tendency to recur again and again.

A second reason, and the one to which I desire especially to call attention at present, is the difficulty of putting the fragments in their normal relation, and keeping them so during the process of union. On looking for the cause of this difficulty, we shall find it, I think, in muscular action, to counteract which we can get very little purchase on the lesser fragment. This I shall endeavor to show, as well as the fact that it is too often abetted by the improper construction of the apparatus employed in the treatment.

Upon careful study of the muscles which

act upon the head of the humerus in its sound state, we find that the deltoid raises it away from the side, aided by the supra- and infra-spinatus, which, inserted into two facets of the greater tuberosity, run over the top of the shoulder-joint. After a certain point is passed, this action is supplemented and aided by the teres minor and subscapularis, the former attached to the third facet of the greater tuberosity, the latter to the lesser tuberosity.

Now, when fracture occurs just below the tuberosities, through the surgical neck, we find that the upper or small fragment is left to the action of the supra- and infra-spinatus, which immediately (unless the line of breakage is much serrated, when impaction may take place) rock it over inwards, so as to make its broken surface look nearly outwards; and in this position it is further fixed by the teres minor and subscapularis. The long head of the biceps, running through the bicipital groove, if unruptured, simply keeps the head of the bone from slipping upwards, and thus, as it were, guides it over into its new position.

At the same time the lower fragment is pulled upwards by the deltoid, coracobrachialis, biceps, and scapular head of the biceps, while its upper end is drawn inwards by the pectoralis major, teres major, and latissimus dorsi. And so far as it is engaged against the upper fragment, it pushes it upwards, tending to tilt it still more.

Hence the relative position of the two fragments is at an angle. They touch below, and indeed may be somewhat impacted; but above they are separated by a greater or less interval. Such is seen to be the case in the specimen (No. 170 of the Mütter Museum), where a partial filling up of the gap by callus has occurred.

In the elaborate work of Hind,* while the agency of the muscles attached to the lower fragment by drawing it inwards is shown, this rotation of the head of the bone is wholly overlooked.

Not only does theory give us this mechanism of the displacement in the fractures now in question, and specimens, so far as I have had access to them, bear out the theory, but cases in practice point the same way.

* A Series of Twenty Plates illustrating the Causes of Displacements, etc., by G. W. Hind, London, 1835.

The great difficulty patients have after this injury is in the raising the arm outwards; and it is due to two circumstances: first, the contact which takes place almost immediately between the tuberosities and the edge of the glenoid cavity, or perhaps, when the long head of the biceps has been ruptured, with the acromion; and, secondly, the impaired action of the supra- and infra-spinatus, teres minor, and subscapularis, by the approximation of their points of attachment.

After fracture of the anatomical neck, so well described by the late Prof. R. W. Smith, of Dublin, we have as a matter of course some stiffening, from inflammation, as well as from the injury inflicted on the soft parts; but the entire use of the joint is apt to be recovered. The upper fragment, having no muscular connections, is not in any way displaced; while the lower one, although its upper end projects somewhat, can be easily kept nearly in its normal condition, and there is no permanent obstacle to mobility.

As to the treatment of fractures below the tuberosities, it is obvious that in order to maintain the fragments in their normal relation during the process of union, we must either try to get a purchase on the upper one and roll it downwards and outwards, or we may raise the elbow so as to make the lower fragment follow the upper, or we may combine both these plans.

A very usual treatment in these cases is by means of an inside angular splint, with or without a pasteboard, gutta-percha, or felt cap over the shoulder. The cap, however, does very little good; it protects the part and steadies it, but obviously has no influence in correcting the displacement of the upper fragment. Nor does the inside splint avail anything, except to steady the limb; and if, as is often the case, it is too short to reach up into the axilla, it has no effect on the fracture at all. Moreover, if it is long enough, but so wide at the upper extremity that instead of going into the axilla it presses against the muscles bordering it, it must be obvious that the displacement of the lower fragment must be simply aggravated, instead of being corrected.

If, however, the inside angular splint is carefully measured, and its upper end so narrowed and rounded off as to go well up into the axilla; and if adhesive strips are so applied over the shoulder as to press down the upper fragment into its place, we

may hope to reduce the deformity, at least in a measure, and in the same degree to lessen the eventual loss of mobility of the limb.

Another plan, which would, I believe, be justifiable in the case of a young person in good health, and to whom the full use of the arm is highly important, is the use of a steel point, driven through the skin into the outer surface of the upper fragment of the bone, and secured by a band to the inside splint at a point near the axilla.

To make the lower fragment follow the upper, we need to apply a splint with an angle going well up into the axilla; one

FIG. 1.



portion of the splint, hollowed somewhat, should fit the inner surface of the arm, while the other, also hollowed to fit the surface of the thorax, should be very broad. These two portions should be at an angle of more than 45° , so as to carry the elbow upwards away from the body. In order to impede respiration as little as possible, the chest-piece should be secured by means of adhesive strips, and not by a bandage or straps passing around the body. And an arrangement of this kind would be far more comfortable and effective if the patient were kept on his back in bed; since otherwise the pressure of the lower end of the body-part would be so great as to become unbearable.

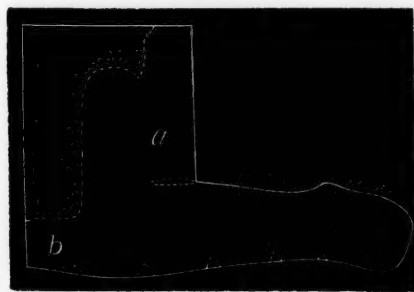
Next, as to the lower portion of the humerus. An examination of specimens will show that the fragments tend to unite at an angle salient forwards; and when this takes place the result is a limitation of the flexion of the elbow. In one case, under my care some years ago, the fracture being very close to the joint, the latter was converted as it were into a stop-hinge; the coronoid process of the ulna came against

the projecting angle of the united fracture, so that the patient, a boy about twelve years old, could not bring his hand near his mouth.

On inquiring into the reason of this, we find that when the humerus is broken low down, the ulna and radius are drawn upwards by the triceps, brachialis anticus, and biceps; the lower fragment is thus forced upwards, while it is tilted forwards by the action of the supinator radii brevis, extensor carpi radialis longior, and pronator radii teres. Some of the other muscles, the flexors, and perhaps the lower fibres of the brachialis anticus, probably aid in producing this effect, the rationale of which is best understood by studying the relations of the parts when the elbow is in a state of semiflexion.

In order to obviate this condition of things, we want to apply pressure well down in front of the elbow, and counter-pressure still lower down behind it. For this purpose I have for several years employed a splint made of strong binder's board, shaped as follows: An outline is drawn corresponding to the *length* of the limb from just below the shoulder to the tips of the fingers, the elbow being flexed at a right angle. The arm part is, however, three times as *wide* as the antero-posterior diameter of the arm itself, and the line marking the ulnar edge of the forearm part is drawn so as to leave a border to be turned up (see Fig.). Now, by cut-

FIG. 2.



ting out this splint still farther as the dotted lines show, we can, after thoroughly wetting it with hot water, bend the portions *a* and *b* so as to get the support we want, and turn up the ulnar margin so as to make the fore-arm and hand rest as comfortably as possible. This shaping of the ulnar margin has another advantage, in

preventing the splint from slipping forwards, when the part *b* is omitted.

But it may be asked, what do we gain by the use of this splint, rather than by that of the ordinary anterior angular splint? We gain, I think, two things: we have the much more adjustable pressure of the edge of the anterior portion of the arm-part, and we place the fore-arm in semipronation, which is far more comfortably borne than supination.

Nor can we get, with the inside angular splint and a short wooden or pasteboard splint in front of the arm, such steady and uniform support as when both are in one piece. It was to meet this want of steadiness that I first had a splint made of wood, on the same plan as that now described, shaping it with my penknife to suit the exact requirements of each case.*

The part *b* may be substituted, sometimes, perhaps, with advantage, by adhesive strips applied so as to draw the olecranon, and with it the lower end of the humerus, strongly forwards. And if there were great difficulty in getting the strips to hold, I believe a steel point, applied in a manner analogous to that proposed for the fracture of the surgical neck, could be safely and efficiently used.

There is yet another plan for treating these fractures of the humerus very low down, which has not to my knowledge been suggested by any one else; and that is to flex the fore-arm somewhat strongly on the arm, and to keep it so by means of a well-padded splint. The difficulty most to be apprehended in carrying out this idea would be that the position might become very irksome.

In all cases of fracture near joints, it seems to me that passive motion should be very early resorted to, and practised whenever the dressings are changed. While the joint is still free, the fracture can be controlled by a firm grasp; but if we leave it for a week or more, the joint becomes stiffened, while the fracture has not yet acquired firmness. By attending to this matter from the first, much trouble is saved to both patient and surgeon in the later stages of the treatment, and the full use of the limb is acquired much earlier than if the joint and its surrounding soft parts are allowed to become stiff.

* American Journal of the Medical Sciences (Transactions of the College of Physicians of Philadelphia), July, 1865.

DILATATION OF THE CERVIX UTERI—A NEW METHOD OF USING SPONGE TENTS.

BY THEODORE H. SEYFERT, M.D.,

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THE mechanical dilatation of the cervical canal of the unimpregnated uterus is one of the most valuable resources of the gynecologist, both for diagnostic and therapeutic purposes, affording him the opportunity to explore freely a region that is, under ordinary circumstances, closed to all investigation, and to treat understandingly any pathological condition which may there exist. In the treatment of many derangements and diseases of the womb dilatation has been successfully used in place of the cautery and knife, and one might suppose, from the great frequency with which this operation is resorted to, that it is one almost wholly devoid of danger and productive only of good results. This, however, is far from being the case, and, although its dangers are not so great as to make one hesitate in having recourse to it on proper occasions, yet they are sufficient to give to the operation a degree of importance not always accorded to it, and to deter one from its employment if the desired results can be attained by other and less dangerous means.

The use of tents may be traced back to the earliest ages; the one composed of compressed sponge, with which we are so familiar, being described in a passage in Aëtius relating to the treatment of sterility dependent upon a contracted os uteri. Cotton, tow, wool, the roots of certain vegetables, ivory deprived of its earthy matter, india-rubber, and many other substances, have been used in their manufacture, particularly the root of the *Gentiana lutea*, which was among the earliest and most frequently employed. The bark of the slippery elm is occasionally used, but it is almost valueless as a dilator, though it may sometimes be employed with advantage as a means of stimulating the diseased mucous membrane of the cervix and body to an altered action. Of all materials, compressed sponge and the laminaria digitata, or sea-tangle, are the most extensively used in the making of tents. The former is undoubtedly an excellent dilator, but there are serious objections to its use. It retains the secretions, allowing them to decompose in the uterus, and the cervical mucous mem-

brane sinks into the cells of the sponge and is lacerated upon the withdrawal of the tent, thus increasing the risk of causing inflammation and those deplorable results which have too frequently followed their employment. Neither is the conical shape of the tent desirable, since it distends the canal very unequally, the external os being freely dilated, while the os internum is often only moderately so.

The laminaria digitata has much to recommend it, and is by some considered to be "the most cleanly, efficient, and convenient tent in use." It can be made smaller than the sponge tent; it has a greater *distending* power, other things being equal; it does not retain the secretions to the same extent as sponge, and is therefore less irritating to the uterus. In from ten to twelve hours it will expand to about three times its original diameter, and if soaked in water for a little while previous to introduction it will act more rapidly. These tents, however, are not without their drawbacks. It is difficult to retain them *in situ*, and their rigidity often renders them less suitable than sponge, particularly in those cases where the uterus is very tender and bleeds readily, or where the os is partly distended by abnormal growths. They are also slower in their action, and, although their ability to overcome resistance is greater than in sponge, they do not expand to the same extent.

Forcible and rapid dilatation is advocated by some practitioners to the exclusion of all other methods. For this purpose instruments are used so constructed that they may be made to expand their calibre after introduction into the cervix. Dr. Ellinger, of Stuttgart, employs a sort of modified polypus forceps, which can be introduced into the narrowest cervix without preliminary dilatation. He uses this instrument in all cases where it is desirable to dilate the womb, either for exploratory purposes or for treatment, and generally allows his patients to go about their business immediately after the operation. Dr. John Bull (*N. Y. Med. Jour.*, Oct. 1873), who narrates the history of a number of cases of dysmenorrhœa successfully treated by rapid and forcible dilatation, believes that its effects are threefold. "First, by breaking up all adhesions, which are often firm and unyielding, it relieves the constriction entirely, and, acting as a derivative, it cures the hyperæmia of the cervix; and, further,

it establishes a radical change in the nutrition of the whole organ." This method of dilatation, though boldly and apparently successfully practised by a few, is in reality too dangerous to come into general use. Besides that, cases of constriction which cannot be permanently overcome by the use of tents may be treated more safely and with the promise of better results by enlarging the canal by *incision*, as practised by Drs. Sims, Barnes, and others.

No matter by what method dilatation is accomplished, it is always well to bear in mind that it is always accompanied with danger. Those who are fully persuaded of this fact—and they may be found among the most eminent gynecologists—rarely resort to the operation if it can be avoided; and when they do determine upon its necessity, they are extremely careful to guard the patient against all extrinsic influences which might by any possibility affect her injuriously. I would lay stress upon this point, because I know that many physicians are disposed to underrate greatly the danger connected with dilatation of the womb; and I am fully convinced that serious troubles may often be attributed to their injudicious proceedings. It is true that the womb will sometimes submit to severe treatment without much evidence of resentment, but were metritis or pelvic cellulitis to occur in a patient after having a tent introduced at the doctor's office and then allowed to go about her business, with instructions to withdraw it after so many hours, I should think that the physician might be justly charged with being the cause of her illness. Metritis, peritonitis, septicæmic fever, tetanus, hysterical convulsions, etc., are not of extremely rare occurrence, and, although the judicious management of the patient will greatly lessen the liability to such unfavorable results, they will nevertheless occur despite the best efforts to prevent them. In other words, the trouble may not be occasioned by a want of skill on the part of the workman, but by serious defects in the instrument which he is obliged to use.

In order to avoid as far as possible the evil consequences arising from the use of tents, it is necessary that the physician should exercise a proper amount of discrimination in the selection of his cases and use a certain degree of care in the performance of the operation itself. As a rule, a tent should never be introduced during

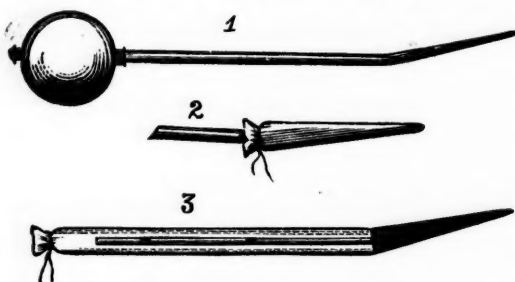
the menstrual period, nor immediately before or immediately after it. The reason for avoiding this time must be obvious to every one. Neither should it be employed when there are any evidences of recent inflammation of the womb or circumjacent tissues, for under these circumstances the irritation and excitement in and around the uterus occasioned by its dilatation would be apt to light up a flame of the most undesirable kind. We should also be assured that the patient can remain in the recumbent position so long as may be desirable. This time will vary with different patients, but in all cases it should be from the moment a tent is introduced until some hours have elapsed after its removal. This is a matter of importance, for too much care cannot be taken in this respect, in order to guard against the development of inflammatory action, particularly if dilatation is carried to a considerable extent. The irritation will continue for some days,—sometimes for a week or more,—and if excitement of any kind arises it is apt to increase until it assumes a serious aspect. Dr. J. Braxton Hicks, in dilating the cervix, always insists upon the patient being kept perfectly quiet, and in his hospital practice enjoins *a week's rest*,—a procedure greatly in contrast with that adopted by those gentlemen who do not hesitate to introduce a tent at their office and send the patient away, leaving its subsequent management to her care.

The placing and removal of a tent do not call for the exercise of much skill, but always demand care and gentleness. Pain is often inflicted unnecessarily by using a tent so large that it cannot be placed in position without employing force,—a proceeding that is never justifiable; therefore it is well to select one not larger than the canal intended to receive it, which, if introduced gently, will give no pain at all. It is also important to ascertain the direction of the cervical canal, and to have perfect control over the movements of the womb when about to introduce a tent. The one may be accomplished by the use of the probe, and the other by firmly fixing a tenaculum into the anterior lip of the uterus, which will enable one to draw down and steady the organ while the tent, having its tip slightly anointed, is slipped in on a line with its axis. It is best not to cover the tent with grease, since it will prevent it from absorbing fluids freely, and render it liable to slip out of position. The pain

which usually accompanies the process of dilatation will demand the administration of a sedative of some kind, since, if it is allowed to continue, it may set up an inflammatory action in the womb or adjoining serous membrane.

In removing the tent it should not be pulled away through the speculum, for by so doing air would be admitted to the uterus through the distended vagina and might occasion trouble; furthermore, the finger would not be able to reach far enough through the instrument. Instead of pulling away the tent by the string which is always attached, it is better to loosen it gently with the finger, and when it becomes detached, the exploratory finger should be ready to take its place. No force should be used in this operation, and if the cervix is found to be insufficiently dilated another tent will be required. Here it is that due caution must be exercised, for serious illness and sometimes death have followed their successive application without allowing proper

have already stated. Dr. Marion Sims writes, "He who will give us an efficient, safe, and cheap substitute for sponge tents will confer a great boon upon surgery. I know of no complete substitute, or I would be too willing to adopt it." What is required in an instrument of this kind is readily determined. It must not abrade the mucous membrane or retain secretions, and it should dilate equably and not too rapidly. More than one ingenious contrivance has sought favor as a substitute for compressed sponge, without succeeding in taking its place. To my mind, the nearest approach to a safe and reliable tent has been made by my colleague Dr. J. A. McFarran, whose inventive brain conceived the idea of preserving the use of compressed sponge whilst doing away with its dangers. The accompanying sketch of his instrument will convey a correct idea of its character. It consists of a small metallic or hard rubber tube (Fig. 1), holding upon its perforated extremity a sponge tent which is completely enveloped by a closely-fitting, thin piece of india-rubber (Fig. 2). The rubber, while permitting the sponge to dilate to its fullest extent, prevents it from absorbing fluids from the canal and protects the cervical mucous membrane from abrasions. Water reaches the sponge through the tube, which has upon its vaginal extremity a distensible rubber ball for its reservoir. Instead of limiting the rubber covering to the tent, as in Fig. 2, it may be made to envelope the entire apparatus, as in Fig. 3, thus keeping the tube in constant contact with the water, which, by entering the perforations made in the tube, readily finds its way to the sponge.



intervals of rest. There is not only a continued irritation which may result in inflammation, but also the danger of an extensive laceration of the cervical mucous membrane that may lead to a fatal termination of the case by septicæmia, a result which has occurred more than once to my knowledge.

If the beneficial results attained by dilatation warrant us in using tents without hesitation whenever they are positively indicated, a knowledge of the dangers accompanying their employment, some of which I have briefly alluded to, should induce us to dispense with their use when it can be done without disadvantage to the patient, and to regard the operation of dilating the cervix uteri as one of no trifling importance. Sponge tents are the best dilators at our service, but they are especially dangerous for the reasons which I

ON THE USE OF THE NITRITE OF AMYL, ESPECIALLY IN CHOREA.

BY G. WINFIELD ZEIGLER, M.D.,

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IN my experience with the nitrite of amyl I have never once seen it cause dangerous symptoms. Its effects differ very much in different individuals, in some instances being very slight, while in others apparently severe.

I have given it (by inhalation) in at least fifty different cases, comprising not less than half that number of different forms of diseases; and found it to be of service in angina pectoris, in dyspnœa often attending phthisis immediately preceding death, hysterical convulsions, asthma, neuralgia, intermittent fever, and chorea.

In angina pectoris it does not act very quickly, but it undoubtedly shortens the attack. In dyspnœa due to the above-mentioned cause I have found it to be very efficacious; often, I feel confident, tiding a patient through the night when it seemed inevitable that he must succumb. To this statement, my colleague Dr. Roland, who has likewise, at my suggestion, given the amyl a fair trial in this difficulty, will bear his testimony.

In hysteria it acts quickly, almost instantly, causing a general relaxation of the system, which, after twenty-five or thirty minims of spt. ammon. aromat. have been given, will leave the patient quite comfortable.

I have employed it in but three cases of epilepsy. In two of them the results were good, and quickly produced; in the other one, which seemed to border somewhat on an apoplectic nature, the effect was not so satisfactory. However, the case was so peculiar in its nature that it could not fairly be called a test case.

I have given it in quite a number of cases of cephalalgia of a nervous or neuralgic type, and do not think it ever failed to afford instant relief.

In asthma it is peculiarly useful. During the month of December last I gave it in three cases, two of whom had been affected with the disease for several months, and the other for some years. All of them suffered just prior to admission with nightly paroxysms of asthma, which disturbed sleep and created general disturbance. Two of these patients left the hospital within four weeks after their admission, apparently cured.

Six months later I saw both of them again, and learned that the disease had not returned. The other case remains under treatment at the present time in the hospital. He is a man about sixty-five years of age, very muscular, and abounding with adipose tissue. His lungs are very emphysematous, and frequently during the first part of his stay in the hospital he

would have slight attacks of hæmoptysis attributable to asthmatic coughing. His pulse ranges from 92 to 100 beats per minute, and his respirations number from twenty-four to twenty-eight, in the standing posture. A very remarkable feature of this case is the constant muscular tremor which pervades his body. Dr. Henry, the present visiting physician to the hospital, and to whom I am under much obligation, tells me that he has known the above patient for more than a year, and that he never knew him to enjoy as good health, comparatively speaking, as he did during the past winter; and, to use the patient's own words, he "never had a good night's rest since the disease got so bad, until he took this medicine."

At first he was given regularly at bedtime from ten to fifteen drops, but later he required it only once or twice a week, and now scarcely requires it at all. Dr. Henry also mentioned the case of a prominent medical gentleman of this city to me, who used to have annual attacks of asthma that were finally, when everything else had seemed to fail, cured by a very short course of treatment with the nitrite.

In neuralgia its effects are as a general thing only palliative; sometimes it will arrest the attack.

I have used it in but one case of intermittent fever, just as the cold stage had fairly set in, on a man thirty-nine years of age, who was laboring under a marked quotidian type of the disease. The chill, which at other times would last about half an hour, was instantaneously arrested and followed by a very mild stage of fever and perspiration.

Before the amyl had been given in this case, the patient was for several weeks upon large doses of chinoidine and quinia, in their turn, without any appreciable effect. He remained in the house for two weeks after the administration of the amyl, but did not have a single return of the fever.

In all the six cases of chorea in which I employed it, the results were most salutary except in one, in which the treatment was interrupted.

It acts, as a rule, when given, by alleviating, to a great extent, the convulsions, and very often causing the patient to fall into a calm sleep.

At first, when I began the amyl treatment, I administered it in rather small

doses, from gtt. iii to v, but gradually I gave it more and more freely, until now I use it almost indiscriminately, when the proper cases present themselves.

In one case of epilepsy, above referred to, a man sixty years of age inhaled nearly f3iv within ten minutes. Dr. Bennett informs me that he has upon different occasions given amyl very freely, and unites with me in saying that it is not a treacherous remedy.

In Cases I. and II., below described, I used the amyl in doses of from 3 to 6 drops three times daily; in Case III., 10 drops three times daily; in Cases IV. and V., f3ss twice daily; and in Case VI., from 3 to 6 drops twice daily. In the first three of these cases I kept a strict record of the respirations, pulse, and temperature, securing the same immediately before administration and a second immediately succeeding the administration, the interval which elapsed between the first and second record being about five minutes; and with a result as follows:

There was an increase in the number of respirations of from four to eight, and in the number of pulse-beats of from sixteen to twenty-four per minute, while the temperature almost invariably rose one-half of a degree, and sometimes a little higher.

A very interesting symptom, and I believe usually the first which makes its appearance, is a sharp, dry cough.

Prof. H. C. Wood, in his excellent work on "Therapeutics," states that shortly after the congestive symptoms (if I may use this term) have been on, there is a sudden change from a flushed to a pallid countenance, but entertains the opinion that this might only be a passive symptom, which could readily follow from a total evaporation of the first supply of the drugs, and could be displaced by the original flush were an additional dose administered; I have observed this same phenomenon, and frequently, upon the strength of Dr. Wood's statement, endeavored to verify the same, but I cannot say I have met with a corresponding result, but that frequently, when pushing the amyl, would, if anything, increase the severity of this symptom, at which time the breathing of the patient would become quite laborious, and the force of the heart's action be diminished.

The following will serve to indicate the class of cases in which the amyl was employed:

Case I.—Kate D., æt. 13; school-girl; admitted to the hospital on the 28th of December, 1875. Two years previously she had an attack of variola, from which, after having suffered a relapse, she recovered, but was left very much debilitated, and with an impairment of speech that rendered her pronunciation of words very indistinct. A year following this she began to be fretful, and at times had fits of excessive laughter. Soon succeeding this period she exhibited irregular muscular movements of the mouth, which at first did not elicit much anxiety on the part of the mother. But before any length of time had passed the symptoms increased in severity, when she was placed upon treatment. She now did well until three months before admission, when she had a mild attack of bronchitis, following which choreic movements again manifested themselves, at first slight but soon marked, and involving the general muscular system, ensuing which event she became much worse than she had been at any time previously. The disease began in the fingers and hands, from thence extending to the arms, legs, and, finally, the neck and face.

Case II.—Mary A., æt. 7; school-girl; admitted January 5, 1876. Eleven days previously choreic movements came on suddenly, and within two days the disease had fairly attacked the whole of the right side of the body. Different domestic remedies were tried, but to no avail, the symptoms each day growing worse until she was received into the hospital, when she was suffering with well-marked hemi-chorea, rendering the right side of her body, superiorly, almost helpless; she had become very much emaciated, and was irritable; no cardiac lesion presented itself upon first examination.

Case III.—Annie McK., æt. 14; school-girl. One month before admission she was one day feeding a small child from a cup of hot corn-starch; accidentally she dropped the cup, spilling its contents on the child's arm, and scalding it. From this mishap the patient at once took fright. Previously to this adventure she had always been in excellent health and pleasant spirits. After the accident she grew more nervous and fretful until a week later, when she was attacked by choreic convulsions of the right hand and arm, gradually extending to the right leg, and from thence to the face. Upon admission the patient was very excitable and fearful. The muscular system was in a high state of commotion, giving rise to very awkward gesticulations and odd grimaces; she complained of anorexia, a tendency to constipation, and a troublesome headache. During sleep the choreic movements kept up in a greater or less degree. The heart's action was very irregular, and at times violent, but no signs of valvular lesion could be detected.

The amyl treatment was fairly tried in five cases. The patients were kept in bed

for at least the first four or five days, giving a well-regulated diet with f3iii of sherry wine daily, together with the amyl, inhaled as before described. The result was as follows:

In Cases I. and II. the choreic convulsions were arrested by the end of the second week, no amyl being given from that time. In Case III. they entirely disappeared at the end of the twelfth day; in Case IV., at the end of the seventh day the patient was perfectly calm, showing no symptoms from that time hence.

The results have been sufficiently satisfactory to elicit a further trial of the drug in this disease.

NITRITE OF AMYL IN INTERMITTENT FEVER.

BY HAMILTON OSGOOD, M.D.,

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THREE or four weeks ago, a case of intermittent fever was brought into the Centennial Hospital during my hours of service. The patient was nearly through the stage of chill. Since I first saw the effects of the nitrite of amyl, I have made use of it in any case in which there were spasmodic conditions, whether muscular or vaso-motor, local or general. Thus, in my hands it has proved successful in several cases of angina pectoris, asthma, colic, spasm of the diaphragm, etc. When, then, I was casting about in my mind for a remedy which would quickly relieve the chilly condition of my Exposition patient, and idly wondering as to how much difference there might at this moment be between the diameters of his peripheral and organic capillaries, it suddenly occurred to me that, since his peripheral capillaries were in a state of contraction (as in all cases of chill), it would be perfectly logical to expect that the vaso-motor spasm would be overcome by the nitrite of amyl. I administered the remedy by inhalation, using about six drops. The remnant of the chill at once disappeared. I did not, however, consider this a fair case, because the chill-period was nearly over before I saw the patient.

A few days later, a poor German was brought to the hospital, in the very acme of the cold stage; face cyanotic, teeth chattering, and he shaking himself to pieces generally. I at once administered the

amyl. Within forty seconds the chill was gone, and the patient complained of too much warmth. Five minutes later, patient began to feel chilly. A few inhalations of the remedy again flushed the surface, and there was no subsequent return of the chill; but fever came on as usual.

In a third case, the chill was more obstinate, or the remedy less effectual, for, although the chill momentarily and at once aborted, it returned several times, each recurring chill, however, being feebler than the preceding one, before I fairly conquered it, which I did by large doses (gtt. xx-xxx). It may be that a heavy dose of the amyl (say f3j) given at the outset would abort a chill at once, and finally. At any rate, the more I see of the effects of this remedy, the less I fear it in large doses. As yet, I have never administered so large a quantity as one drachm, excepting in a case of angina pectoris, which I mentioned, among others, in my paper in the number of the *American Journal of the Medical Sciences* for October, 1875. In this case, the patient was a delicate lady; but she was not in the least disturbed by the large dose, and, I think, could have borne a larger.

It is premature for me to set the proper value on the nitrite of amyl as a remedy in malarial fever. I have merely seen that in three cases it aborted the chill, having no especial effect upon the later stages, except more or less to shorten them.

I give my experience to the profession, hoping that physicians in malarial districts will test this remedy and let us know whether it proves successful. There is, at any rate, something gained, if we can only abort the chill.

1805 CHESTNUT STREET.

TRANSLATIONS.

CURE OF TRICHIASIS.—Dr. I. Gayat (*Le Mouvement Médical*, May 27) recommends the employment of depilation as usual, but for the purpose of preventing the return of the hairs, he suggests, instead of the caustic pastes frequently employed, the use of drainage. This is carried out by the insertion of a hollow needle, such as is used with the hypodermic syringe, but smaller and about an eighth of an inch in length. The irritation produced by the presence of this needle in the hair-follicle gives rise to inflammation and suppuration of the hair-bulb, the pus finding its way through the

hollow needle. Occasionally sufficient inflammation is aroused to obliterate several neighboring hair-sacs. Where the needle alone does not suffice to induce inflammation, a fine platinum wire attached to a galvano-caustic battery may be employed.

x.

FUNGUS OF THE BLADDER, RECURRENT PHOSPHATIC CALCULI, REPEATED LITHOTRIPSY, RAPID DEATH.—M. Poison (*Le Progrès Méd.*, No. 27, 1876) reports the case of a man 67 years of age, who had suffered from stone for four years, accompanied by pain on movement, irritation of the glans penis, frequent micturition, and finally bloody urine. He sought treatment at the Hôpital Beaujou, where lithotripsy was performed with amelioration of all the symptoms. Repeated relapses occurred, and crushing was employed no less than forty times within a few years. In addition to the calculus, a fungus of the bladder was diagnosed by Dr. Dolbeau, and the various symptoms, together with vesical catarrh, became gradually more marked. One day, without any operation having been performed upon him, the patient was seized with a chill, and within six hours died. The autopsy showed the left kidney fattily degenerated and containing small calculi. Three small calculi were also observed in a pocket of the bladder, together with a violaceous soft tumor the size of a large chestnut, filling the bas-fond, and surrounded by numerous phosphatic calculi the size of an almond and smaller. A collection of débris at this point formed an appropriate mother-liquor for the development of these calculi.

x.

AMPUTATION IN A DIABETIC PATIENT—FATAL RESULT.—M. Huette gives the following case (*Le Progrès Méd.*, May 27), which occurred recently under the care of Prof. Verneuil. A man, 52 years of age, apparently in the enjoyment of perfect health, sustained a railway injury involving the foot. The question of conservative or operative treatment arose, and was determined in favor of the latter. Tibio-tarsal amputation was performed successfully, but was not followed by the usual traumatic fever. At the end of twenty-four hours the patient, who had been up to that time lying quite quiet, with a temperature of 99° F., suddenly underwent a change: his extremities became cold and cyanosed, the tongue and lips dry and brown, the breath

presented a peculiar sour odor, and the patient experienced considerable oppression, sub-delirium, and extreme restlessness. The temperature shortly after fell to 98.2°, respirations 28, pulse 118. In his delirium the patient revealed what he had hitherto omitted to mention, namely, that he had been for some time the subject of diabetes. Examination showed the urine of 1030 specific gravity, and containing a large proportion of sugar. The patient's pulse rapidly increased, while his temperature remained stationary, coma supervened, and he succumbed about forty-eight hours subsequent to the operation. As usual in diabetes, the post-mortem examination gave a negative result. M. Verneuil remarks, apropos of this case, upon the grave prognosis of operations in patients suffering from diabetes. Had the condition of this patient been known previous to the operation, conservative measures would clearly have been indicated.

x.

DIFFERENTIAL DIAGNOSIS BETWEEN OVARIAN AND SUB-PERITONEAL SEROUS CYSTS.—M. Koeberle mentions a number of characteristics which serve to distinguish between sub-peritoneal serous cysts and ovarian cysts properly so called. The principal difference is in the liquid which they respectively contain. It is known that sub-peritoneal serous cysts may arise from various organs,—from the ovaries themselves, from the uterus, from the Fallopian tubes, from the broad ligament, and even from the kidneys. With the exception of venous cysts of the kidneys, whose composition is peculiar and to which allusion is unnecessary, all the others, though originating in different organs, contain a liquid the aspect and composition of which are identical in nearly every case. While the fluid from the ovarian cyst is most generally ropy and viscid, that of the sub-peritoneal cyst is fluid and limpid as spring-water. While the former contains an abundant proportion of albuminoid principles, such as albumen, metalbumen, and paralbumen, the fluid of the sub-peritoneal serous cysts is habitually wanting in these elements.

The differential diagnosis of these cysts may, according to M. Koeberle, be epitomized as follows. Sub-peritoneal serous cysts are always unilocular. Their contents are always highly fluid, colorless, and limpid as water. They contain no albumen. They are not incompatible with reasonably

good health. The phenomenon of fluctuation is ordinarily very manifest, and their walls may usually be observed to be thin. Their development is ordinarily slow.

Ovarian cysts are single or multilocular. Their liquid contents are usually more or less viscid, and quite rich in albumen, metalbumen, and, above all, in paralbumen. To the presence of the latter may be attributed the precipitate by nitric acid, which is soluble in acetic acid; examined with the microscope, this liquid contains characteristic, yellowish, granular globules, from .003 mm. to .03 mm. in diameter. The cyst-walls are sometimes very thin. Their development is slow.

Some peculiarities belong more especially to certain cysts. Thus, cysts of the Fallopian tubes may contain a certain quantity of albumen. As to cysts containing pure fat, masses of epidermis, hair, or teeth, these are always connected with the ovary.—*La France Médicale*, May 13, 1876. x.

CANCER OF THE TESTICLE IN AN INFANT OF TEN MONTHS.—M. Depaul gives the following case (*La France Méd.*, May 13). A child, 8 months of age, was brought to him suffering from a cylindrical solid tumor situated in the scrotum to the left, continuous with the cord, and, therefore, seated apparently in the testicle. It measured three centimetres (1 inch) long by two centimetres ($\frac{2}{3}$ inch) across. The skin was movable about the testicle; there was no effusion into the tunica vaginalis. M. Depaul, being in doubt as to the nature of the tumor, treated it by resolvents. The infant continued to thrive, and felt no pain even when the tumor was touched. Two months later the skin of the scrotum became red and adhered to the tumor at one point, an abscess formed, opened, and a fistula became established, which enlarged, permitting a hernia of one-third of the tumor. MM. Broca and Pozzi, consulted by M. Depaul, advised the performance of an operation as soon as possible. Castration was performed, the cord being severed by the *écraseur*. No hemorrhage ensued, and a perfect cure was effected. Examination of the tumor showed it to be a mixed cancer, scirrhus for the most part, with a certain proportion of sarcoma. x.

THE ANTISEPTIC TREATMENT OF WOUNDS (Bidder: *Deutsche Zeitschrift für Chirurgie*, Bd. vi. p. 222).—Since March, 1874,

Minich has been treating all wounds in the hospital in Venice, of which he has charge, antiseptically; at first by the method of Lister, afterwards introducing some modifications on account of the expense attending the use of the original dressing. His results were favorable, inasmuch as he had no case of diphtheritis, septicæmia, or pyæmia, and but two deaths from erysipelas. He concludes from his experience that this last disease is a true infectious disease, in opposition to the opinion of Thiersch. For this reason antiseptics are of no value against erysipelas, and it must be combated by other means.

He tried sulphite of sodium, as recommended by Prof. Polli, in Milan, in the treatment of erysipelas, using a solution of one part to nine, with the addition of one-half part glycerin. All the substances used in the dressings were thoroughly impregnated with this solution, and the instruments dipped either into it or into a solution of carbolic acid. As long as moist dressings were used to the wounds, this solution was employed; but when, in the process of healing, the use of salves was indicated, a lead-salve to which the sulphite of sodium had been added was placed on the granulating surface. He claims to have observed the following results:

1. Erysipelas was entirely expelled from the wards in which it had previously raged, as but three cases occurred; in two of these there was direct infection, owing to defective application of the dressing, while the third was a case of urinary fistula, to which the dressing could not be satisfactorily applied.

2. In no operative case, and in no case of complicated fracture conservatively treated by this method, did any disease of the wounds develop. The internal use of this remedy, which is also advised by Polli, gave negative results, and caused disturbance of the stomach, and diarrhoea.

Bidder simplifies the method of Lister, for private practice, by not using the spray, while using a carbolic-acid solution of the strength of three per cent., in which the instruments, etc., are dipped, and with which the wound is washed. Notes of three cases treated in this way are given.

1. Amputation above the malleoli, on account of caries, in a woman, aged 69. Healing by first intention in eighteen days, with five changes of the dressing.

2. Resection of the knee-joint, in a boy aged 10½ years. Healing without suppuration in three weeks, with but four renewals of the dressing.

3. Opening of the first interphalangeal articulation of the index finger. W. A.

THE PATHOLOGY OF SUN-STROKE (K. Köster: *Berliner Klinische Wochenschrift*, 1875, No. 34).—At the post-mortem examination of the body of a soldier who died from exposure to excessive heat, there was found an effusion of blood into the upper ganglion of the right sympathetic system of the cervical region, while the ganglion itself was swollen to twice its normal size, and its nerve-fibres pushed asunder and destroyed. Evidences of lesser hemorrhages were found in the lower part of the right sympathetic, and traces of more extensive ones in the lower portions of the same nerve. Effusions of blood were found in and about both vagi, and also in the sheaths of both phrenic nerves. The places on the vagi at which these changes had taken place were swollen, and there had been hemorrhages into the sheaths of both carotids at the lower part of the neck. The brain was moderately hyperæmic, and beneath the ependyma of the left ventricle there were several small ecchymoses. The lungs were in the position of expiration, the right lower lobe was infiltrated with blood, and the blood in the vessels and heart was dark and fluid. Ecchymoses were found under the pericardium and endocardium of the left ventricle. W. A.

THE PATHOLOGY OF LEAD-PALSY (E. Remak: *Centralblatt für Chirurgie*, No. 22, 1876).—Remak supposes from clinical reasons that we are compelled to assume a special origin for lead-palsy, and hopes that accurate microscopic examination will establish the existence of circumscribed changes in the region of the motor ganglion cells of the gray anterior columns.

From several observations made on cases of so-called general lead-palsy, in one of which not only the supinator muscles but also the bicipitals and brachiales interni were paralyzed, he draws the conclusion that in saturnine palsy of the muscles of the upper extremity, groups of muscles which functionally belong together are affected in typical order, without regard to the peripheral nerve-trunk in which their motor fibres run. This method of successive involvement of these muscles may be explained by the supposition that the ganglion-cells

which correspond to them lie in the same section of the spinal cord, and so near to one another that the pathological process affects them at the same time, or at least in rapid sequence. W. A.

HYDRO-THERAPEUTIC TREATMENT OF SCARLATINA.—Steiner (*Wien. Med. Presse*, 1876, No. 12), among other methods, uses the "wet pack," covering the patient, after applying the warm damp sheets from neck to thighs, with a blanket, and giving at the same time wine or brandy. At first slight chills are experienced, which soon pass off, and are followed by a feeling of relief, and children who have previously been unconscious will answer questions intelligently, and, later, begin to talk. Steiner keeps the packing in position about two hours. By this time the water evaporated from the surface of the body makes its appearance in drops on the surface of the packing, a sign that the temperature of the patient's surface is beginning to fall. When unwrapped, the patient continues to feel comfortable for two hours or more, the temperature remaining 1.5° to 2° Cent. lower than before. When it again begins to rise, it is time to repeat the packing. Large doses of quinine should be given during the course of this treatment, which, in Steiner's hands, has been so successful that the twelve patients observed all recovered without any complication or sequelæ. X.

ELECTRICITY IN ACUTE ARTICULAR RHEUMATISM.—Dr. Abramowski (*Berliner Klin. Wochens.*, Nos. 7 and 8, 1876) uses a wet anode placed on the back of the patient's neck, while a wire brush is drawn over the affected joint. Occasionally the electrodes are placed near each other over the joint. Dr. A. claims for electricity that it quiets the pain in the articulations, lessens fever, and shortens the course of the disease. It does not, however, guard against relapse, and his experience has not been sufficiently extensive to enable him to state positively that the use of electricity serves to prevent valvular heart-complications. Dr. Abramowski gives some account of other methods of treatment, and adds notes of a number of cases in which electricity was used according to his method. X.

DR. LABBÉ, of Paris, recently extracted, by gastrotomy, a fork from a man's stomach. A week after the operation the patient was doing well.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, JULY 8, 1876.

EDITORIAL.

THE ASSOCIATION OF THE MEDICAL COLLEGES.

IN another column of this journal will be found a summary of the doings of the representatives of medical colleges at their late Convention in this city. It will be seen that a large number of influential schools were represented, and, as the object of the meeting was to advance the condition of medical education among us, some beardless youths may be led, by the respectability of the assemblage, to hope that the millennium is approaching. Indeed, at the session of American medical editors, held shortly after the Solons of education had departed, it was gravely asserted that now it was right and proper to leave the subject of medical education solely to the Association of Medical Colleges, and that it would solve the problem as quickly as possible. It was hinted that for others to attempt even criticism would not only be an impertinence, but would put back the work. But then these editorial advocates of the Convention were, we believe, all of them "of the earth, earthy." Professors in medical schools, they naturally beheld things *coulour de rose*, and naturally desired to be left in peace by fellow-editors of different type and habits. Those editors who were not connected with the medical schools did not appear to be so sanguine.

Looking at the matter seriously, remembering the previous conventions of medical teachers which have labored hard and brought forth not even "a ridiculous mouse," bearing in mind the history of the discussion of medical education in the American Medical Association, it seems to us incredible that the members of the Asso-

ciation of Colleges really expect from the general profession sympathy or belief in their earnestness and sincerity, before they prove themselves by *accomplishing* some good. The naturalist would scarcely be blamed for being incredulous in regard to the leopard changing his spots through a process of voluntary internal evolution. Nevertheless, the evils of our present system are so great, and the remedy so hard to find, that, notwithstanding the failures of the past, anything which claims to offer relief must attract earnest attention. Moreover, there were, undoubtedly, many men at the Convention whom the American medical public delighteth to honor.

Under the circumstances, therefore, although the movement inspires but little faith, the Convention challenges a careful examination of its actions. What, then, has been accomplished?

Three condemnatory resolutions were passed,—one affecting various schools which practise the "beneficiary scholarship" method, one aimed at the Siamese Twin school of Louisville, and perhaps also at the Long Island Medical College, and one striking fairly and squarely at the Michigan University.

Nothing was said against the practice of admitting men to study medicine who are destitute of a minimum English education, and whose minds are almost as wild and untrained as the most savage zebra of South Africa; no denouncement was heard of the universal plan of making no inconvenient examination as to whether a student really had or had not studied the number of years he claimed; nothing was whispered against the furious cramming for an examination; nothing against the farce of an examination by competitive bodies of men whose livelihood is dependent upon a reduction of the severity of that examination. Indeed, it would not be fair to expect anything to be said against these common sins. "Colonel," exclaimed an enthusiastic young militia-man, as the two stood, some years

since, watching from an eminence a proslavery mob sacking an abolition stronghold,—“Colonel, why don’t you call out our regiment? we would quiet those fellows in half an hour.” “Young man,” was the reply, “are you such a fool as not to understand that nearly all our bayonet-carriers are in that crowd?”

The action of the Convention has, therefore, been, as it must have been, very mild; but the gentler force may be the successful one, and we would, therefore, look upon the result with a degree of satisfaction and hope, were it not for a resolution passed very early in the meeting:

“*Resolved*, That the action of the Convention shall not be considered binding upon the colleges represented, unless endorsed by their respective faculties.”

So the Convention binds nobody,—leaves every one to the dictates of self-interest. Does it not look like grown-up child’s play?—or, to compare great things with small, like Nero fiddling while Rome is burning?

The breadth of the farce which was so seriously and solemnly enacted in our city comes very plainly into view in the light of the fact, published two weeks ago in the *Times*, that leading colleges represented in the Convention hastened to join hands of fellowship with the Michigan University, “unanimously” outlawed by the Convention. Truly, the Laughing Philosopher might find here as much of suggestiveness as would he whose mission it was to weep.

CORRESPONDENCE.

NEW YORK, June 24, 1876.

TO THE EDITOR OF THE PHILA. MEDICAL TIMES:

DEAR SIR:—Prof. Erskine Mason has lately reported a case of rupture of the bladder, which is of special interest on account of the operative measures undertaken for its relief. He presented the post-mortem specimens from the patient at the Pathological Society, and related the following history:

The man, who was of middle age, was

admitted to Bellevue Hospital May 13, and stated that he became intoxicated on May 10, and was arrested in consequence. That night, while in the station-house, he began to suffer great pain, and was entirely unable to pass his urine. After calling vainly for assistance for a long time, an officer at last entered his cell, and deluged him with cold water, which seemed to afford him temporary relief, though he was still unable to pass a single drop of urine. In a short time, however, the pain returned with greatly increased violence; but he now received no response whatever to all his agonizing cries for some one to come to his relief; which, as Dr. Mason truly remarked, is too often the history of the treatment which suffering prisoners receive in our station-houses.

On the day following he was taken to the Tombs, where his water was twice drawn for him with the catheter. As before mentioned, he was sent to Bellevue on the 13th, where Dr. Mason saw him not long after his admission. He found that he was a very intelligent man, and that he was entirely rational, though his condition indicated the most extreme prostration. The abdomen was much swollen, being tympanitic in its upper portion, and dull on percussion below. There was marked discoloration of the scrotum, but nothing like a perineal tumor. With the catheter twenty ounces of turbid urine were drawn, which contained no blood. Afterwards, however, the abdomen still presented the same characteristics, with tympanites above and dulness below. An exploration per rectum discovered the existence of a sac containing fluid, which was situated behind the prostate and a little to the left. *Diagnosis*, rupture either of the bladder or of the posterior portion of the urethra.

As it happened to be the hour for Dr. Mason’s clinic, he was taken to the amphitheatre, and ether was administered. This seemed somewhat hazardous, on account of the condition of the patient, but was done at his special request. The perineal section was made in the usual manner, and a rent was then discovered in the posterior wall of the bladder, which was closely contracted. Now passing a catheter through the opening, Dr. Mason drew off ten ounces more of turbid urine from the cavity of the pelvis, which was also unstained with blood, but contained shreds of lymph. He was of the opinion that much of the urine which he drew off at first had likewise come from the pelvic cavity. It seemed doubtful whether the patient might not succumb on the table; but he slowly rallied from the ether. Afterwards, however, he gradually sank, and he died the next morning (May 14), twelve hours after the operation, and on the fourth day from the inception of his trouble.

The necropsy revealed active peritonitis, with matting of the intestines together and

marked effusion. The rent in the wall of the bladder was one and a half inches in length, and its edges were much swollen, everted, and sloughy. This rupture was evidently the result of external injury, as there was no stricture or any other internal disease of the genito-urinary tract whatever.

Dr. Mason has had four cases of rupture of the bladder since 1874, and operated on them all in the same way. The first case of operative interference in cases of this accident was reported by Dr. J. Walker, of Boston, in 1845. The operation was performed twenty-four hours after the receipt of the injury (by a railway accident), and the patient recovered. The second case was one of Dr. Willard Parker's, and this patient also recovered. In the third case the operation was performed by Dr. Robert Weir, of this city; but, as it was complicated by fracture of the pelvis, a fatal result ensued. Dr. Mason's first operation was on the third day after the accident, and the patient recovered. The second was only five hours after the accident, and was also followed by recovery. In the third case twenty days had intervened, but the patient lived four days after the operation. In this last case the operation was on the fourth day after the accident, and the patient lived twelve hours. In all probability, if it could have been done earlier his life might have been saved.

It will thus be seen that out of seven cases of rupture of the bladder, in which perineal section was performed, four recovered. On the other hand, of seventy-eight cases collected by Dr. Mason, in which nothing was done, or the patient simply catheterized (the ordinary way of treating these cases), there were only five recoveries. In but one of these was the rupture into the peritoneal cavity, and only three were due to violence. The evidence seems, therefore, to be very strongly in favor of the operation.

At the last meeting of the County Medical Society, Dr. A. B. Crosby read an excellent paper on the subject of "A Lost Art in Surgery," by which he gave his auditors to understand that he referred to *perfect cleanliness*. He first spoke in detail of the hygienic arrangements of the hospital which, while a surgeon in the army, he established at Poolesville during the late war, and which, he claims, was the first one that was constructed on the pavilion plan. The total mortality, including all patients with necessarily fatal injuries, was only ten per cent. Next he referred to the Third Surgical Division at Bellevue Hospital, whose wards were formerly occupied by the Lying-in Service, but had to be given up for that purpose on account of the alarming prevalence of puerperal fever in them. After being thoroughly disinfected by means of chlorine gas, under the supervision of Prof. Doremus, they were occupied by surgical patients, and during the past eighteen

months, in which the strictest sanitary regulations have been rigidly enforced, there has been no pyæmia whatever, and erysipelas has appeared in but two instances, viz., after operations for the removal of cancerous growths. He then mentioned the happy results which had followed the observance of the essential requisites of perfect cleanliness in every respect in the Long Island College Hospital, with which he was formerly connected, and where the liquor sodæ chlorinatæ is now regarded as the sheet-anchor of safety; and finally spoke of the successful efforts of Winkel in eradicating puerperal fever from the Lying-in Hospital at Dresden, as related by Dr. Lusk, in his late paper on the epidemic at Bellevue.

These facts seemed to show conclusively that (1) sepsis can be prevented by perfect cleanliness, not only theoretically, but in actual fact, and (2) that, sepsis having occurred, its further spread can thus be effectually prevented. Dr. Crosby regarded this as the real secret of Lister's success. (Yet the former constantly makes use of disinfection with antiseptics to the utmost extent, in conjunction with simple cleanliness, as generally understood. Is not the antiseptic method, therefore, to be properly classed under the head of perfect cleanliness? Prof. Penrose, of the University of Pennsylvania, has always insisted that the hands of the accoucheur should be "chemically clean.")

Dr. Crosby thinks that carbolic acid is useful for the purpose of *preventing* putrefaction, but that it is powerless to *stop* the process when it has once commenced. This is accomplished best by the permanganate of potassium or liquor sodæ chlorinatæ. He did not mention salicylic acid at all.

In conclusion he briefly discussed the question of pavilion hospitals, and stated that, while the latter have some advantages (especially on the score of economy, if the ground-space is ample), the experience at Bellevue proves conclusively that old and (supposed) plague-stricken and fever-breeding buildings can be absolutely and completely disinfected, if the proper means be employed, and can be maintained permanently in that condition afterwards, with care and vigilance.

In view of the above considerations, it will be seen that a great responsibility in this respect rests upon all attending surgeons to hospitals; and Dr. Crosby brought his paper to a close by the enunciation of certain rules and regulations which he thought it imperative to be observed by the surgeons themselves, the nurses, orderlies, patients, and, in fact, every person connected in any way with the wards.

The last two papers read before the Academy of Medicine have attracted more than ordinary attention. The first was on Incision and Dissection of the Cervix Uteri, by Prof. E. R. Peaslee, and was eminently conservative

in tone. In it he declared himself as distinctly opposed to the free incisions of the os internum so frequently made at the present time for the relief of obstructive dysmenorrhœa and other affections, and showed that the cavity of the uterus after the use of Greenhall's and Simpson's metrotomes, instead of being of the normal shape (somewhat resembling the form of an hour-glass), was that of a bottle, narrow at the top and widening more and more to the base, and, moreover, with its bottom knocked out. It is true, the dysmenorrhœa is relieved, but a uterus with a cavity of this shape cannot retain semen any more than it can menstrual blood; and sterility is almost the inevitable consequence. Of eight cases that Dr. Peaslee had known to become pregnant after this operation, six had aborted. Another very grave objection to these deep incisions is the dangerous hemorrhage that is likely to ensue; and he here related a case in point. A patient of his own had very slight stenosis of the cervical canal, which was easily overcome by the mildest means; but, as she was about going abroad, he advised her to consult the great gynecological light at Edinburgh, Sir James Simpson, in case she had any return of her trouble. She did not have any return of it; but, as she was spending two days in Edinburgh on her trip, she thought she could not miss the opportunity of seeing the celebrated physician, and so consulted him. He had not been long with her, however, when he produced his metrotome, operated, and in three minutes afterwards left the house. The husband also left her in a few minutes after the operation, and on returning, about half an hour afterwards, was astonished to find that his wife had fainted from loss of blood, and was still bleeding profusely. Simpson was immediately sent for, but both he and his assistant had gone out of town to attend a wedding. Another medical man was then summoned, but the lady nearly died in consequence of the operation. She was obliged to spend on a sick-bed in Edinburgh the entire time which she had expected to devote to travel on the Continent, and her health was much impaired for a long time afterwards. Cases of Simpson's are known to have died from loss of blood in cabs on their way home from his consulting-rooms, after this operation. No statistics in regard to it had ever been published; but Dr. Peaslee contended that if they were made public, as they certainly ought to be, the statement of the facts would astonish the profession and the community. Dr. Thomas had known of five deaths resulting from it, and he himself of four.

In Sims's operation, where complete discision of the vaginal portion of the cervix on both sides is carried out, we have the additional grave dangers of pelvic cellulitis and septic peritonitis. The cavity of the uterus afterwards is of much the same shape as after

Simpson's and Greenhall's, though in a less marked degree. The discision of the vaginal cervix is exactly equivalent to its amputation, as all the circular fibres are cut through, and its contractility entirely destroyed. The edges become everted, and sterility is the almost inevitable result, the condition being precisely the same as in cases of laceration of the cervix during parturition. (Yet Dr. Sims was present at the County Medical Society, a year or two ago, when Dr. Emmet read his suggestive paper on lacerated cervix, and, we remember, fully endorsed his views as to the evil consequences following this condition, and the necessity for the operation designed to repair it.) The edges rarely unite spontaneously, and when they do the result is never satisfactory. Sometimes union takes place on one side, but the condition is then just as bad as if neither had united.

Dr. Peaslee charged Dr. Sims (though he did not mention his name directly) with sometimes performing this operation in cases where there was not the slightest necessity for it, either from the force of habit, or, worse still, from a sort of insane desire to resort to operative procedures. A patient of his own, in whose case there was no stenosis of the cervical canal whatever, was suffering from a slight leucorrhœa, depending on congestion of the endometrium, and which readily yielded to treatment. A few days after she had passed from under his charge cured, a medical friend told him that he had been hastily summoned in the night to attend this same patient, whom he found losing an enormous quantity of blood, in consequence of having undergone this operation (presumably performed by Dr. Sims). Dr. Peaslee thinks that Greenhall's metrotome ought never to be employed, and he would confine the use of Simpson's to cases of fibroids high up in the cavity of the uterus. When Sims's operation is performed on account of fibroids, the cuts in the cervix should be immediately afterwards closed by suture. Grailly Hewitt now never incises the os internum at all.

Dr. Peaslee then went on to speak of Sims's operations for antelexion, which he denounced as "schematic, imaginary, and fallacious." Formerly Dr. Sims had amputated one-half of the vaginal portion of the cervix. This had nothing whatever to recommend it, and has long been abandoned. The only way in which it could have been at all beneficial was by relieving the congestion by means of the flow of blood it caused; and this could be equally well accomplished, and with much less mischief to the patient, by the application of a few leeches. This operation, he said, does not reach the seat of the flexion at all. As well might you attempt to cure stenosis at the diagonal flexure by free incisions through the sphincter ani as to correct antelexion in this way. He then showed that Sims's present operation (frequently called the sagittal,

from the shape of the incisions) proceeds on the erroneous principle of trying to remedy the deformity without first replacing the organ in its normal position (which is the first element of success in this class of cases), and stated his belief that the original diagram illustrating it, which Dr. Sims published ten years ago, and has appeared in every work of authority on gynaecology since, has misled hundreds of operators, and occasioned a vast amount of mischief. (This is the cut that first appeared in Sims's Uterine Surgery, and is numbered 144 in the second edition of Thomas's book.) In this figure, said Dr. Peaslee, the uterus is not anteflexed at all, and it can be easily demonstrated that this operation is a perfect impossibility unless the axis of the body of the uterus is *normal*; for if the organ is decidedly anteflexed, a slitting-up of the posterior wall of the cervix (so as to make the uterine canal a straight line) will bring this incision far beyond the posterior vaginal junction, and directly into the peritoneal cavity. This operation is really, then, one for the relief merely of curvature or flexion of the cervix, but when restricted to 'classes of this kind is often a very useful one.

The concluding portion of Dr. Peaslee's paper was devoted to some notice of the methods which he himself was in the habit of employing in relieving the same troubles for which the above operations were undertaken. Twelve years ago he had had made a set of steel dilators of graduated sizes, which would generally act sufficiently well when the tissue of the organ was in a normal condition. These were provided with knobs which prevented their extremities from reaching more than a quarter of an inch beyond the os internum into the cavity of the uterus. But this method he had found somewhat tedious and uncertain, and ten years ago he devised an operation which accomplished the same purpose of overcoming stenosis in a more prompt and efficient manner. This instrument consisted of a knife concealed within a tube, which was regulated by means of a screw so as to incise the tissues to any depth both at the external and internal os, though very slight incisions are usually all that it is necessary to make. Both the ora are oblong in shape, the normal calibre of the os externum being of the size of a circle whose diameter is about one-fifth of an inch, and that of the os internum of one whose diameter is about one-seventh of an inch, the diameters of an ordinary Simpson sound. Now, an incision of less than half a line on each side of the os will enlarge its calibre about double and yet the fusiform shape of the cervical canal will still be preserved. This should always be done as far as practicable; and it is therefore utterly absurd to make incisions one-third to one-half an inch deep into the uterine walls at the os internum (thus completely altering the shape of the whole cavity), as is

done by the metrotomes above mentioned. It is rarely necessary to enlarge the diameter of the os internum to one-third of an inch, or of the os externum to one-fifth of an inch. The normal angle at which the axis of the cavity of the body strikes that of the cavity of the cervix is one hundred and sixty-five degrees; and before any procedure whatever for the relief of stenosis is attempted, it must be ascertained with certainty that apparent stenosis does not depend really on flexion of the organ.

The other paper before the Academy to which reference has been made was one read by invitation by Dr. T. Stevens, of Albany, on the Cause and Treatment of Chorea, in which he announced and advanced considerable evidence to prove the startling proposition that chorea is a functional disorder, depending entirely on defective or erroneous refraction of the eye. His observations have now extended over a series of thirty-six cases of chorea, and in twenty-seven of these simple hypermetropia existed, in four hypermetropia with astigmatism, in four myopia with astigmatism, and in one different degrees of myopia in the two eyes. No case of chorea that he has yet met with has been free from some error of refraction in the eye, and all that he has had an opportunity of testing have been cured or relieved by the wearing of glasses appropriate to the existing condition.

At another recent meeting of the Academy, Dr. Charles A. Leale read a paper on fatty degeneration of the placenta as a cause of death in the fœtus. He stated that the rate of progress made by this condition varied very greatly in different cases, and that it was often very slow and insidious; but he believed that it was more frequently destructive to foetal life than many at present supposed.

Among the causes of fatty degeneration which he mentioned are abnormal conditions of the uterus or ovaries, disease or insufficient vitality of the ovule, the same conditions of the spermatozoon, derangement of the nervous supply, and partial separation of the placenta from shock or other cause. The varieties referred to were, simple fatty degeneration, anæmia with atrophy, degeneration with tuberculosis, calcareous or fibrinous deposits, and that due to syphilis, scrofulosis, or leucocythæmia. In regard to the treatment, he recommended the induction of premature labor, in accordance with the views of Fordyce Barker, in cases where fatty degeneration is suspected, the foetal heart-beat becoming more and more feeble and the mother's health breaking down, after first having made a fair trial of such remedial agents as seemed appropriate to the case. From the above it will be seen that the term *fatty* degeneration would not strictly cover all the ground that the writer intended in his paper.

The American Neurological Association met

here on the 7th of June, and remained in session for three days. There was about the same attendance as last year, and nearly all the papers read provoked the most lively discussion on the part of the members; showing that both in regard to theory and practice there are considerable differences of opinion among our distinguished neurologists.

An American Gynæcological Society has also been organized during the present month. The Philadelphia members are Drs. Atlee, Penrose, Wallace, Goodell, Drysdale, Ingham, and Albert H. Smith. Dr. Fordyce Barker was elected President, Drs. W. L. Atlee and W. H. Byford, Vice-Presidents, and Drs. J. Marion Sims, Geo. F. Lyman, T. Pauni, and Wm. Goodell, Councillors. The first regular meeting will be held in this city, September 13 of the present year.

The time of the meeting of the New York State Medical Society has been changed from February to June, and the annual session has just taken place at Albany. Dr. Squibb, of Brooklyn, was elected President, and Dr. J. W. Kendall, of Baldwinsville, Vice-President, for the ensuing year.

The New York Flower Mission distributed 17,350 bouquets to the sick and poor, between May 15, the date of its opening for the season, and June 8.

The widow of the late A. T. Stewart has recently given \$74,500, in sums of from \$500 to \$2500, to various charities in the city, and signifies her intention of continuing the good work. Such gifts are peculiarly acceptable to these institutions at the present time, when their regular supporters are generally leaving town for the summer.

Dr. John O. Stone, one of our best known and most esteemed physicians, fell dead in the street on the 6th of June, from disease of the heart, in the sixty-fifth year of his age. Another sad death in the State was that of Dr. George Cook, resident physician of Brigham Hall, a hospital for the insane at Canandaigua; who was cut so severely about the head by one of the inmates of the institution that both the temporal and transverse facial arteries were severed, and fatal hemorrhage ensued before assistance could be brought. The man is said to have been laboring under the delusion that the doctor was endeavoring to poison him.

The weekly reports of the Registrar of Vital Statistics indicate a very fair state of health in this city at the present time, the mortality representing an annual death-rate of about 22 per 1000 of the population; which is, unfortunately, almost as low as it often gets in this tenement-scourged community.

PERTINAX.

PROF. BALARD, of France, who, whilst a student, discovered bromine, is dead.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MARCH 23, 1876.

The PRESIDENT, DR. WILLIAM PEPPER, in the chair.

Section from a Peyerian patch in the stage of medullary infiltration. By FREDERICK P. HENRY, M.D.

THE specimen under the microscope, taken from a patch in the stage of medullary infiltration, exhibits the acme of the characteristic lesion of typhoid fever. Any further change which may take place in the deposit is of a retrogressive nature. The cellular infiltration may undergo a gradual disintegration and be absorbed, or it may perish *en masse* and form a slough, to be loosened and cast off by a suppuration at the periphery of the follicle or patch. I would suggest that, in individual cases, the result may be largely influenced by the degree of severity of one of the most constant symptoms of typhoid fever. I have reference to the diarrhœa, or, more strictly speaking, to the attendant peristaltic contraction of the intestinal muscular coat. The pathology of gastric ulcer will illustrate my meaning. That lesion has its origin in a hemorrhagic infarction caused by interference with the circulation by the contraction of the muscular coat of the stomach, during violent and long-continued efforts at vomiting. We have a precisely similar arrangement of the circulation in the intestine. Supposing one of the diseased patches, in a case of typhoid fever, to have attained its acme, what is to be the fate of the deposit? Is it to be gradual disintegration and absorption, or sudden death and separation? This question, I venture to suggest, is decided by the amount of peristalsis present. If this be slight, the pressure of the deposit upon its own nutrient vessels is the principal factor in the necrobiotic process, and gradual disintegration and absorption ensue; on the other hand, if to this pressure be added an excessive amount of peristalsis, sloughing of the whole mass will result. It might be objected that we have no facts which warrant the supposition that the intestinal contraction can interfere to so great a degree with the circulation. For example, it might be urged that we have nothing in the intestine resembling gastric ulcer. Admitting this to be true for one moment, for the sake of the argument, I would reply that the vermicular nature of the contraction in the small intestine precludes the possibility of a sudden hemorrhagic infarction from this cause alone. But is it true that in the *entire* intestinal tract we have nothing similar in its etiology to gastric ulcer? When we consider that the most frequent site of simple intestinal ulceration is the rectum, and that this ulceration coincides

with a violent tonic, although periodic, contraction of this portion of the tract, it seems impossible to deny that there is a causative relation between these two phenomena.

Under ordinary circumstances, we have nothing similar to this in the small intestine, but in typhoid fever a vermicular contraction of the ileum may have all the significance of a tonic contraction of the rectum in dysentery. For example, a Peyerian patch is at the height of the stage of medullary infiltration; its reticular spaces are crowded with cells, and the natural retrograde process of slow disintegration is about to begin; at this moment diarrhoea sets in, from some error in diet perhaps, and for a few hours there is considerable peristaltic contraction. I believe that this additional impediment to the circulation may be sufficient to alter the nature of the retrograde process and convert it, from a gradual disintegration, into a sudden necrosis.

Certain well-known facts in the pathological history of typhoid fever may be adduced in illustration of this *peristaltic theory*. It is observed by all writers upon the subject that the follicles occupying the lowest portions of the ileum are the earliest affected, and that, in them, sloughing occurs in a direct ratio with their degree of vicinity to the ileo-cæcal valve, but, so far as I know, no attempt has been made to explain these facts. The first fact explains itself. The disease begins earliest in the lowest follicles because they are the lowest, *i.e.*, because they are farthest removed from the centre of the circulation. This is not immediately apparent, owing to the anatomical arrangement of the small intestine upon the convex border of the fan-shaped mesentery, which causes all its parts to be equidistant from the mesenteric attachment; but a glance at the vascular distribution will show that the ileum is supplied by the terminal twigs of the superior mesenteric artery, and that the superior mesenteric vein has its origin in the lowest portion of this division of the small intestine. The general catarrh which ushers in the intestinal lesions is therefore, from the beginning, more intense in the neighborhood of the valve, owing to this natural tendency to a mechanical hyperæmia.

The same facts, taken in connection with the *peristaltic theory*, explain the more frequent occurrence of sloughing in the lowest portions of the ileum. Suppose a follicle, two feet above the ileo-cæcal valve, to have arrived at the height of the stage of medullary infiltration; at this moment a succession of peristaltic waves traverse the ileum; they may be insufficient in number and duration to cause sloughing of the mass, but transfer it to the neighborhood of the valve and the case would be different. The effect upon the circulation of a peristaltic wave gradually increases in intensity as we approach the valve, owing to the gradually increasing impediment

to the return of venous blood, and sloughing gradually becomes more extensive in the same direction. The bearing of these views upon the treatment of typhoid fever is obvious. Although the severity of the fever does not depend upon the extent of the intestinal lesions, I think no one will deny that, apart from the danger of perforation, an important indication for treatment is to moderate the severity of the lesions. If we wished experimentally to infect the system by the introduction of putrid material through the lymphatics, we could adopt no better method than one which would imitate, as closely as possible, the conditions that exist during the sloughing stage of typhoid fever. In short, we would place decomposing material at the *periphery* of some portion of the lymphatic system, where, consequently, the greatest number of lymphatics would come simultaneously in contact with the poison. The drug which has been used so successfully to allay peristaltic action in peritonitis is the one indicated here. I would advocate the habitual use of opium and its derivatives in typhoid fever, with the view of allaying peristalsis and consequently diminishing the risk of sloughing and perforation. This is contrary to the doctrine of the Viennese school, which holds that the intestinal lesions are the result of the casting out of a *materies peccans* from the blood; but such a doctrine is contrary to all that we know of the physiology of the absorbents, which are pre-eminently afferent vessels.

The diarrhoea of typhoid fever may even be charged to peristalsis, as is the diarrhoea of cholera (*Rindfleisch*); but, as this is not an essay on the treatment of typhoid fever, I will say no more at present in favor of a regular administration of opium in that disease.

The intestinal lesions of typhoid fever illustrate the importance of studying the gross as well as the microscopic appearances of disease. The gross appearances are here far more characteristic than the minute. The specimen under the microscope shows a universal enlargement of the glandular elements, a partial disappearance of the reticular framework, and the large multinucleated, myeloid, or giant cell, none of which appearances, either singly or combined, can be considered characteristic of typhoid fever.

The myeloid cell is a normal constituent of the medulla of bones, and is also found in phthisis and in myeloid sarcoma, while the combined appearances are found in an ordinary non-specific, acute lymphadenitis. In phthisis, it may be remarked as an interesting fact, this cell is found in combination with a pathological adenoid tissue.

These cells are best seen in the border of the field, where their contours are not obscured by the neighboring elements.

The power used is one of about four hundred and fifty diameters.

Dr. PEPPER said it was unquestionably true

that, in most instances of enlargement and inflammatory changes in lymphatic glands, they follow some local irritant at the beginning of the lymphatic tract. But it is also recognized that in cases of blood-poisoning, where the blood is highly charged with morbid substances, morbid processes may be brought about without such primary local irritation. The view that the changes in Peyer's patches are due to the absorption of matters of a morbid character is not impossible where the disease has followed the absorption of tainted drinking water or food; but there are other cases in which it always seemed to him that the lesion must be explained as the result of a constitutional infection.

With regard to the probable cause of sloughing, he thought that a considerable number of observations would be necessary to prove it the result of such weak peristalsis as we have at the lower end of the ileum; and, although it is generally true that the follicles nearest the ileo-cæcal valve are the first to ulcerate in typhoid fever, it is by no means invariably so, as he had frequently met patches considerably above this valve which were much more deeply ulcerated than those below them and closer to the valve. Further, as a matter of clinical observation, in his own experience, perforation and hemorrhage had occurred from extensive sloughing in cases of typhoid fever where constipation had existed, rather than diarrhœa, or at least where diarrhœa had not been prominent. In the last case of perforation he had met, there was constipation from the very beginning, and the bowels had never been moved except by enema or by oil, and the stools were always consistent.

As to the therapeutics of typhoid fever, Dr. P. preferred a soluble condition of the bowels, one or two stools daily, rather than to control them by the administration of opium, at least in any quantity.

Dr. HENRY knew that pathological writers generally did not consider that the disease began in the lymphatics, but that it is ushered in by a catarrh of the mucous membrane of the intestine, followed by an inflammatory state, which becomes centred in the Peyer's patches.

With regard to the strength of the contraction of the muscular coat, he thought that the slightest possible amount of contraction might turn the tide in favor of sloughing, if the gland had arrived at such a degree of infiltration as to be at the turning-point at which it would either go into necrobiotic death with absorption or into sloughing. Again, with regard to perforation occurring high up, he was inclined to look for a similar local cause for such an anomaly as enlarged mesenteric glands, which might press more upon the blood-vessels returning from the perforated portion, thus emphasizing the lesions in that situation.

Dr. Henry further said, if he recommended

the administration of opium, he did not desire to abandon the use of cathartics, but would prefer to use those which would favor osmosis from the blood-vessels, as the salines, rather than those which act by increasing peristalsis, as oil does.

Dr. JOS. G. RICHARDSON said that he thought the diarrhœa was apt to come on (perhaps more from inflammation of the mucous membrane than from errors of diet) at a time when the necrobiotic condition had not attained its height; also, that in his own experience he had found the diarrhœa frequently worse in the first week, and diminished towards the third week. He also felt able to confirm Dr. Pepper's statement that perforation and hemorrhage were more apt to occur where the diarrhœa was slight than where it was free.

Dr. HENRY did not intend to give the impression that he thought diarrhœa was absent at the beginning of the fever. He favored, also, keeping the contents of the intestine soluble, and thus allowing them to pass to the rectum with the least possible amount of peristalsis. He did not think the function of defecation, which is intended to empty the rectum, would interfere with the return circulation from the ileum, but might even favor it by the pressure exerted from without by the abdominal muscles.

Dr. RICHARDSON thought with Dr. Henry, that in cases where it just hangs in the balance as to where perforation shall take place, some very slight influence, as muscular contraction, might become the determining cause of the perforation.

Dr. NANCREDIE then said that he thought that Dr. Pepper underrated the thickness of this coat, even in comparison with that of the stomach. It consists, as does that of the stomach, of a circular and longitudinal layer. In the stomach the circular layer is perfect, but the longitudinal quite the reverse, as represented by the longitudinal and oblique fibres.

If this arrangement in the last-mentioned organ could so interfere by its contraction with the circulation of the blood as to produce hemorrhagic infarction, surely the perfect circular and perfect longitudinal coats of the intestine could also effectively interfere with the return circulation in an inflamed Peyer's patch. In reality, the perfect *longitudinal* coat, in addition to the circular, was a much more effective arrangement for interfering with the venous circulation than the perfect circular but imperfect longitudinal muscular coats of the stomach.

Dr. JAMES TYSON thought the mistake lay in adopting too exclusive a view as to the immediate cause of the ulceration in typhoid fever. While he thought it impossible to deny that the intensity of the action of the blood-poison, whatever its true nature, could be so great as to cause such an inflammatory pro-

lification of the elements of the Peyerian follicles as of itself to produce compression on the blood-vessels and resulting necrosis, it is nevertheless not impossible that at a certain stage the additional hyperæmia due to muscular contraction might be the determining cause of the necrosis.

Dr. HENRY remarked that since we have the operation of a similar contraction acknowledged to be the cause of ulceration in the stomach, it is certainly not unreasonable that such contractions should act similarly on the small bowel.

Dr. RICHARDSON said that the force with which an invaginated gut is sometimes held shows that there may be considerable power in the contraction of this bowel.

Dr. TYSON thought that some of this close adhesion met with in invagination was inflammatory.

Dr. JOHN GUITÉRAS said that he had not heard Dr. Henry's paper, but, from the ensuing discussion, he thought the doctor was supporting the views of Rindfleisch, who gave great importance to the action of the muscular coat in keeping up the engorgement of the mucous membrane, in catarrhal inflammations of the intestines. As regards perforations, he did not think that the muscular action could be of importance, because perforations are less frequent in dysentery, when peristaltic action is greatest. In typhoid fever, the condition of the muscular coat was more one of paralysis.

Dr. NANCREDE referred in this connection to the result of Mr. Hutchinson's post-mortems in cases of invagination. This gentleman has reported some cases of his own, with several of other observers, where, after the usual treatment by injection of air and fluids, death ensued with the bowels still unrelaxed. Yet, although the duration of these cases extended over several days, the post-mortem revealed so slight, if any, adhesions that the bowel could readily be pulled out, comparatively unchanged. Mr. Hutchinson's cases were reported only with a view of showing the feasibility of restoring the bowel to its normal position by abdominal section, but Dr. Nancrede thought that they supported his view of the strength of the muscular coat being greater than we generally think, for it sufficed to prevent the return of the bowel to its proper position, even after considerable force had been exerted by the injection of air and fluid.

Dr. PEPPER did not wish to depreciate the importance of the contraction of the muscular coat of the small intestine. He was disposed to agree with Dr. Tyson in regard to the part taken by the muscular coat in maintaining an invagination of the bowel. He had never met perforation of the bowel in dysentery except when it accompanied quite extensive sloughing of the coats of the intestines with evidence of the extension of inflammation to the cel-

lular tissue surrounding the bowel, indicating that the perforation was caused by the progressive destructive ulceration of the coats of the intestines. Finally, he did not think the pathology of gastric ulcer was by any means settled, and he was not himself ready to admit that it is caused by hemorrhagic infarction in all cases.

Dr. HENRY said that he had presented to the Society, a year ago, a case of gastric ulcer which accompanied cirrhosis of the liver, and at that time he asked the question whether this association might not be more frequent than is usually supposed. He felt inclined to believe that such is the case.

He desired to know whether, in the experience of members, there is not a greater tendency to congestion in the lower part of the ileum, diminishing as we ascend, and whether it is not possible that mechanical hyperæmia may influence sloughing.

Dr. PEPPER was inclined to suppose so; yet simple perforating and cachectic ulcers (non-tuberculous) which appear analogous to ulcer of the stomach are more frequently found in the duodenum and upper part of the ileum than near the ileo-cæcal valve.

Dr. RICHARDSON suggested that the fact that in typhoid fever the patient is almost always in the recumbent position would have some bearing upon the occurrence of mechanical hyperæmia, diminishing a tendency thereto in the lower portion of the small intestine.

Dr. HENRY replied that the blood had to go the same round, no matter what the position of the patient, and that therefore his posture could have little to do with it.

ABSTRACT OF THE PROCEEDINGS OF
THE ASSOCIATION OF THE REPRESENTATIVES OF AMERICAN MEDICAL
COLLEGES, HELD AT PHILADELPHIA,
JUNE 2 AND 3, 1876.

A CONVENTION of representatives of numerous medical colleges of the United States was held in the hall of the Jefferson Medical College of Philadelphia, June 2 and 3, 1876, in pursuance of a call previously published.

The following colleges were represented: Jefferson Medical College, Medical Department University of Pennsylvania, College Physicians and Surgeons of New York, Medical Department University of Louisville, Hospital College of Medicine of Louisville, Long Island Hospital Medical College, Medical Department University of Iowa, College of Physicians and Surgeons Syracuse University, Chicago Medical College, Medical Department University of Georgia, Indiana Medical College, Medical Department University of Wooster, Cleveland Medical College,

Detroit Medical College, Starling Medical College, Medical Department University of Vermont, St. Louis Medical College, Atlanta Medical College, Medical Department University of Nashville, Medical Department Vanderbilt University, Missouri Medical College, Keokuk College Physicians and Surgeons, Columbus Medical College.

Prof. J. B. Biddle was elected President of the Convention, and Prof. Leartus Connor was elected Secretary.

On motion of Prof. E. Curtis, it was

"Resolved, That the action of the Convention shall not be considered binding upon the colleges represented, unless endorsed by their respective faculties."

At the afternoon session, the committee to prepare business for the convention reported the following questions for its consideration:

Question 1. Shall the beneficiary system, with its present abuses, be condemned or endorsed?

After discussion, on motion of Prof. E. Curtis, the following preamble and resolutions were adopted with reference to this question:

"Whereas, The practice of reducing or remitting in individual cases the established fees of a college has the objectionable feature of discriminating between students who may be equally deserving, and opening the door to possible gross abuses; therefore

"Resolved, first, That this Convention regards the above privilege as one to be deprecated in general, and, if put into practice at all, to be exercised both rarely and reluctantly, and only in unusual circumstances, and after unsolicited application by proven deserving candidates.

"Resolved, second, That anything like a wholesale system of such reduction or remission of established fees, or any open solicitation of recipients of such favors, be regarded as in the highest degree improper, and that any college indulging in such practices deserves to forfeit its place on the *ad eundem* list of medical colleges."

Question 2. Shall two consecutive courses of lectures in one year entitle students to become candidates for graduation?

On motion of Prof. E. Curtis, it was

"Resolved, That it is the opinion of this convention that no two consecutive sets of lecture-tickets shall be regarded as fulfilling the usual prerequisites of instruction for graduation, where the time between the beginning of the first course and the end of the second is less than fifteen months."

Question 3. Shall any faculty under any circumstances issue a diploma not bearing the graduate's name?

On motion of Prof. Waterman, it was

"Resolved, That no medical faculty should issue a diploma not bearing the graduate's name."

On the succeeding day, the following questions submitted by the committee were discussed.

On motion of Prof. Rogers, the President and Secretary of the Convention, and Prof. Atchison, were appointed a committee on publication.

Question 4. Is there any reason why the customary diploma fee shall be abolished?

On motion of Prof. Rogers, it was

"Resolved, That it is the sense of the Convention that the diploma fee should not be abolished."

Question 5. Is it advisable to adopt a graded course of study?

On motion of Prof. Bodine, the following preamble and resolution were adopted in reference to this question:

"Whereas, A knowledge of the elementary branches of medicine should precede a study of the practical branches,

"Resolved, That, in the hope of inducing students to prolong and systematize their studies, this Convention recommends to all medical colleges to offer to students the option of three courses of lectures, after a plan similar to the following. Students who have attended two full courses of lectures on anatomy, chemistry, materia medica, and physiology, may be examined upon any of these subjects at the end of their second course. During their third course such students may devote themselves to the lectures upon the theory and practice of medicine, surgery, obstetrics, and diseases of women and children, upon which subjects only they shall be examined at the final examination for the degree of M.D.,—their standing, however, to be determined by the results of both examinations."

On motion, adjourned till 4 P. M.

At the afternoon session, Prof. Atchison, from the committee to whom the subject of permanent organization was referred, reported the following resolutions:

"Resolved, 1. That this Convention now proceed to form a Provisional Association of American Medical Colleges, under its present officers.

"Resolved, 2. That when the Association adjourns, it shall adjourn to meet at the call of its President.

"Resolved, 3. That the various medical colleges be invited to take into consideration the project of forming, at the next meeting of this Provisional Association, a permanent Association of American Medical Colleges.

"Resolved, 4. That, for the furtherance of this object, a committee of three be appointed at this meeting to confer by letter with the various colleges, and invite their views on the proper object and plan of such proposed organization, and, upon the receipt of the same, to draft a constitution and by-laws for a permanent Association, to be submitted at the next meeting of this Association.

"Resolved, 5. That the advisory resolutions upon matters of college policy passed by this Convention be printed and forwarded to all regular medical colleges in the United States for their consideration."

The chair appointed as committee to carry out the foregoing resolutions Prof. T. A. Atchison, Prof. Edward Curtis, and Prof. L. P. Yandell, Jr.

These resolutions were adopted, and the Convention resolved itself into the Provisional Association of American Medical Colleges.

Question 6. Is it proper for a regular college to have any kind of alliance with homœopathy?

On motion of Prof. Atchison, it was unanimously

"Resolved, That, in the opinion of this Association, medical colleges ought not to recognize or hold fellowship with any school or its alumni in which irregular medicine is taught as a part of the curriculum."

Question 7. Can college fees be made uniform?

On motion of Prof. Geddings, this question was referred to a committee of five, to report at the meeting of the Association to be held in 1877.

The chair appointed Profs. Geddings, Gross, Angier, E. Curtis, and L. Curtis, this committee.

On motion of Prof. Biddle, the following resolution was unanimously adopted:

"No degree in medicine should be conferred under any circumstances, except after an examination in person of the candidate upon all the branches of medicine."

On motion, the Association adjourned to meet at the call of the President.

GLEANINGS FROM EXCHANGES.

BATHS OF CHLORAL HYDRATE IN CONFLUENT SMALLPOX (*The Western Lancet*, April, 1876).—M. Beaumetz reports that he has obtained the most beneficial effects from full baths of chloral hydrate in cases of confluent smallpox; the baths were used at the period when the epidermis, detaching itself *en masse*, leaves the dermis exposed. The dose of the chloral for a bath never exceeded twenty grammes; the results were not alone a thorough disinfection of the patient, but also a prompt cicatrization of the skin.

A SIMPLE TEST FOR ASCERTAINING THE PRESENCE OF BLOOD IN LIQUIDS OR IN CLOTH (*The Western Lancet*, April, 1876).—For physicians and clinical instructors the following method of discovering the presence of blood may be useful, especially in the examination of urine: it combines simplicity with absolute certainty. Mix in a test-tube two cubic centimetres of tincture of guaiac with

the equal volume of oil of turpentine, and then add a few drops of the urine which is to be examined. If it contains any blood, even in minutest quantity, the whole mixture at once shows a more or less intensely blue color, sometimes a deep indigo, while this coloration is produced neither by normal urine nor by urine containing albumen or pus. If you wish to ascertain whether stains in linen, wood, etc., contain blood, you proceed in this way. Dissolve five grammes of guaiac in 100 cubic centimetres of absolute alcohol, and filter the solution; then mix five cubic centimetres of this solution with the same volume of rectified oil of turpentine, and put into this mixture the small piece of linen, wood, etc., the suspicious stains of which have been previously treated with warm diluted acetic acid. The presence of blood will at once show itself by a blue color.

RUPTURE OF UTERUS—DEATH (*Virginia Medical Monthly*, May, 1876).—Dr. John M. Payne reports a case of uterine rupture. The woman was a multipara, aged about 40 years, apparently in good health, and at full term of utero-gestation. The os uteri was dilated and dilatable; vertex presentation; waters not ruptured. The patient had had no hard pains, nor had she taken ergot. The pains, however, were observed to wear off gradually, and the patient complained of weakness and blindness; the pulse sank rapidly, and the extremities became cold. Not a drop of blood escaped through the vagina. The head receded beyond the reach of the finger, and in a few moments the patient was dead. On opening the abdominal cavity, there was a gush of blood. A knuckle of the cord, a leg, and an arm protruded through a rent in the anterior portion of the uterus, near the mouth of the left Fallopian tube.

GENERAL ATROPHY OF THE RIGHT INFERIOR EXTREMITY AFTER INJURY (*New York Medical Journal*, May, 1876).—MM. Desmos and Barié report the following case. A man, aged fifty-six years, had the wheel of a wagon pass obliquely over his right foot. The contusion was slight, and, though lame, the patient resumed his occupation after a few days. Five months later, the patient, still somewhat lame, observed that the entire lower extremity became emaciated, and that the lameness increased. At this time, measurement established a difference of four centimetres. The atrophy evidently affected the entire limb, even the buttock. He was more easily fatigued when using it, and there were shooting pains through it, and painful sensations of cold, and tingling. The skin around the circumference of the calf was a little smoother than elsewhere on the limb. In short, the case was one of injury of the foot, apparently slight, which called forth a slow and continued pathological process, progressing to a general atrophy of the entire limb, its muscles, bones, articulations, skin, etc.

The authors explain the process by the irritation of the sciatic nerve having been transmitted to its point of origin, passing to the gray substance, and affecting this as well as the trophic centre.

THE PNEUMOGRAPH IN TETANUS (*The Medical Record*, May 13, 1876).—M. Richet thinks that the pneumograph will be of great use in determining the prognosis and proper treatment of tetanus. He employed it recently in a case of this affection consecutive to gangrene of the feet following frost-bite. The disease proved fatal by asphyxia in sixteen hours. The respiratory tracings showed at intervals an interruption in expiration, a sort of expiratory spasm, due partly probably to spasm of the glottis, and partly to spasm of the abdominal expiratory muscles. In another case, the tetanic pause occurred during inspiration. In this case the symptoms lasted three days, and the patient died in a sort of comatose condition, but not asphyxiated. The tracings in this latter case were exactly similar to those obtained from a frog poisoned with strychnine, or excited by the induced current. Now, when the spasm is due to the inspiratory muscles, tracheotomy is useless, and a cure may be hoped for, because the hæmatosis will always be sufficient to permit the absorption of therapeutic agents and give them time to subdue the medullary irritation. When, on the other hand, the spasm is expiratory, the hæmatosis, at a given moment, will be interrupted, and asphyxia be imminent. In such a case as this, tracheotomy is indicated, and, in fact, this operation has succeeded in saving life in several cases of tetanus.

DEATH FROM ADMINISTRATION OF ETHER (*The Chicago Medical Journal and Examiner*, May, 1876).—Dr. E. L. Holmes reports the case of a man æt. 74, who died while under the influence of ether given during an operation for the extraction of a cataract. He had performed a preliminary iridectomy some three months previously, and had then given ether without any very alarming symptoms having been observed. On the final occasion, after about half a pound of ether had been consumed, violent coughing ensued, and was soon followed by an extremely livid appearance of the face, and then by cessation of breathing. Artificial respiration and elevation of the feet of the man soon re-established the respiration, the lividity disappeared, and the operation was proceeded with and was finished, requiring about ten minutes. At the end of this time it was noticed that the patient was sinking again, and the same means were resorted to as before, but this time unsuccessfully, death resulting in a few moments. No autopsy was obtained.

In the *American Medical Weekly* of May 6 may be found an account of a case of immediate death following a uterine injection of perchloride of iron, one part to seven.

MISCELLANY.

DEATH TO SYPHILITICS!—Dr. Alois Gruber, of Vienna, in a recent address, advocated the plan of punishing every venereal patient the first time by a fine, the second by imprisonment, and the third by exile or the death-penalty. These recommendations he made not jokingly, but in "dead earnest." On another occasion, in referring to this subject, he says that by exile he means solitary lifelong confinement, and he considers these penalties just as applicable to the female as to the male sex. Gruber acknowledges that at first sight death may seem quite rigorous treatment, but believes it justifiable. On looking over this remarkable brochure, we find that the lectures were delivered not before a catholic-political meeting, but a scientific assemblage,—the Wiener Doctoren-Collegium. Strange to say, no one of the members made the proposition to test the utility of the plan advocated by Gruber.—*The Clinic*, April 29, 1876.

ACCORDING to the *Medical Press and Circular*, a case of death from sloughing of the tongue and abscesses in the jaw, with complete prostration, recently occurred in Dublin, as a sequela of the administration of two pills, each containing two grains of blue pill.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JUNE 18, 1876, TO JULY 1, 1876, INCLUSIVE.

- McCORMICK, CHAS., SURGEON.—To proceed to New York City, and there await orders. S. O. 123, A. G. O., June 20, 1876.
- VOLLUM, E. P., SURGEON.—Assigned to duty at St. Louis Barracks, Mo. S. O. 121, A. G. O., June 16, 1876.
- CLEMENTS, B. A., SURGEON.—Orders of 16th instant, assigning him to duty in Department of Dakota, revoked, and to report to the Commanding General, Department of the Platte, for assignment to duty. S. O. 129, A. G. O., June 27, 1876.
- STERNBERG, GEORGE M., SURGEON.—Assigned to temporary duty as Attending Surgeon at these Headquarters. S. O. 74, c. s., Department of the Columbia.
- HORTON, S. M., ASSISTANT-SURGEON.—Granted leave of absence for four months. S. O. 123, c. s., A. G. O.
- WOODHULL, A. A., ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 121, c. s., A. G. O.
- WHITEHEAD, W. E., ASSISTANT-SURGEON.—Assigned to duty at Camp Supply, Indian Territory. S. O. 131, Department of the Missouri, June 26, 1876.
- BARTHOLOP, J. H., ASSISTANT-SURGEON.—Granted leave of absence for two months, to visit Centennial Exhibition. S. O. 69, Department of the Columbia, June 3, 1876.
- WEISEL, D., ASSISTANT-SURGEON.—Assigned to duty at Fort Canby, W. T. S. O. 69, c. s., Department of the Columbia.
- CLEARY, P. J. A., ASSISTANT-SURGEON.—Assigned to duty at Fort Lyon, C. T. S. O. 131, c. s., Department of the Missouri.
- PORTER, J. Y., ASSISTANT-SURGEON.—Granted leave of absence for fifteen days (Fort Brooke, Tampa, Florida). S. O. 120, Department of the Gulf, June 26, 1876.
- CHEERBONNIER, A. V., MEDICAL STOREKEEPER.—Granted leave of absence for one month. S. O. 123, c. s., A. G. O.